

# British Columbia Influenza Surveillance Bulletin

Influenza Season 2013-14, Number 03, Weeks 44-45  
October 27 to November 9, 2013

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## Increasing influenza activity in BC

In weeks 44-45 (October 27 to November 9, 2013), surveillance indicators suggest that influenza activity began to increase in BC. The proportion of patients with influenza-like illness (ILI) among those presenting to sentinel physicians increased during this period, but remained within the expected range for this time of year. The proportion of emergency room visits to BC Children's Hospital attributed to ILI increased but remained consistent with those observed in previous seasons. An increasing trend in Medical Services Plan (MSP) claims for influenza illness was observed in recent weeks throughout the province; however, rates remained near 10-year median levels. Six specimens tested at the provincial laboratory were positive for influenza viruses, including three influenza A(H1N1)pdm09, two influenza A (un-subtyped), and one influenza B. The positivity rate for influenza A and B combined was 2.4%. Rhino/enteroviruses continued to be the predominant respiratory viruses in circulation. Influenza A (un-subtyped) was detected in two additional specimens tested at the BC Children's and Women's Centre Laboratory. No laboratory-confirmed ILI outbreaks due to influenza were reported.

Prepared by BCCDC Influenza & Emerging Respiratory Pathogens Team  
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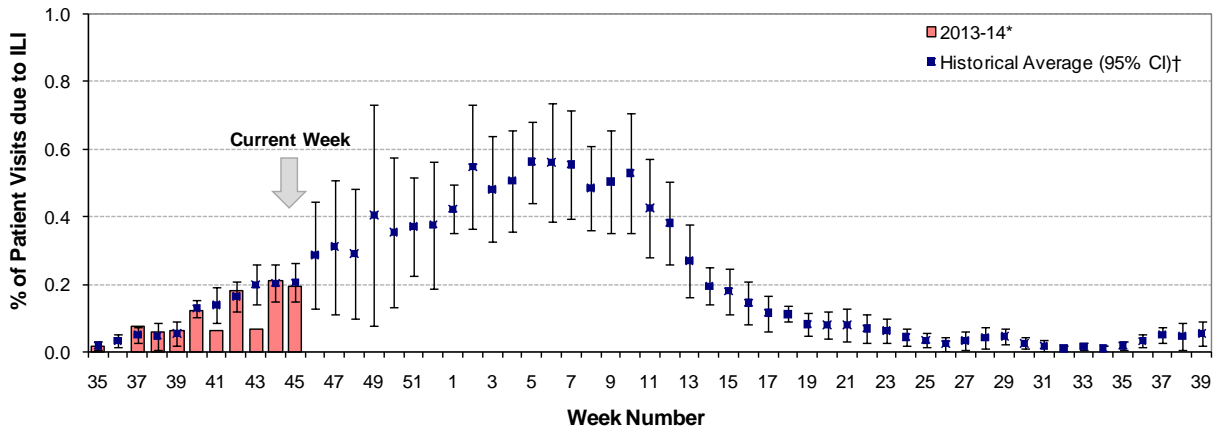
Report Disseminated: November 14, 2013

## British Columbia

### Sentinel Physicians

In weeks 44-45, the influenza-like illness (ILI) consultation rate among sentinel physicians was 0.2%. This rate was higher than week 43, when fewer than expected visits were reported, but consistent with the historical average for this time of year. To date, the proportion of sentinel physician sites reporting is 74% and 54% for weeks 44 and 45, respectively.

**Percent of patient visits to sentinel physicians due to influenza-like illness (ILI) compared to historical average, British Columbia, 2013-14**

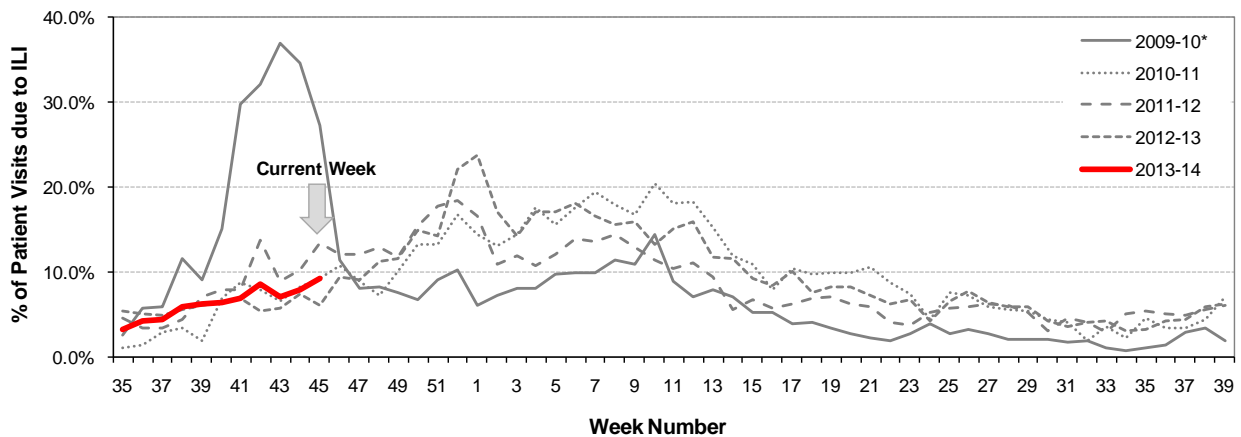


\* Data are subject to change as reporting becomes more complete.  
† Historical average based on 2001-02 to 2012-13 seasons, excluding 2008-09 and 2009-10 due to atypical seasonality; CI=confidence interval.

### BC Children’s Hospital Emergency Room

The proportion of visits to BC Children’s Hospital Emergency Room (ER) attributed to influenza-like illness (ILI) increased from previous weeks to 7.9% in week 44 and 9.3% in week 45. However, rates remained consistent with those observed at this time of year in previous seasons.

**Percent of patients presenting to BC Children’s Hospital ER with triage chief complaint of “flu,” or “influenza” or “fever/cough,” British Columbia, 2013-14**

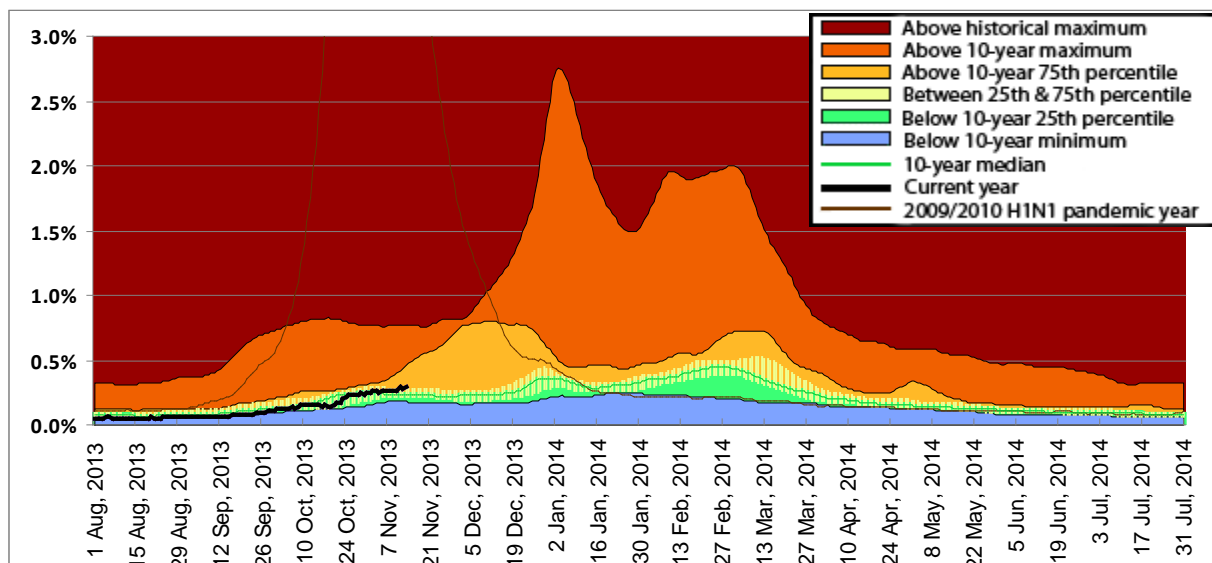


Source: BCCH Admitting, discharge, transfer database, ADT  
\* Data from 2010-11 to 2013-14 is based on new system (Triage Chief Complaint) not directly comparable to data for 2009-10. In bulletins before week 9 of 2011-12 season, data is based on old system.

### Medical Services Plan

In weeks 44-45, BC Medical Services Plan (MSP) general practitioner claims for influenza illness (II), as a proportion of all submitted MSP claims, increased in recent weeks in all regions of the province but remained near 10-year median levels. The atypical spike in MSP claims in NHA in week 41 was attributed to a surveillance artefact.

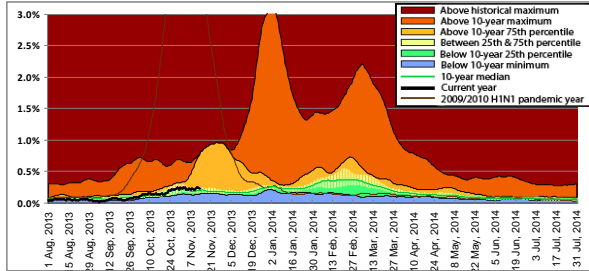
**Service claims submitted to MSP for influenza illness (II)\* as a proportion of all submitted general practitioner service claims, British Columbia, 2013-14**



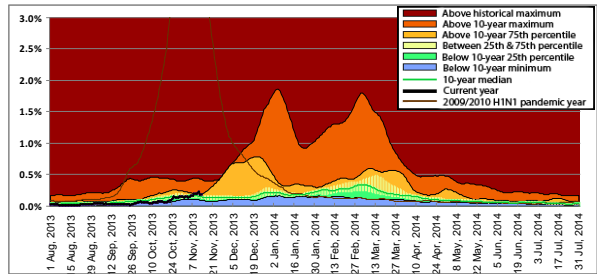
\* Influenza illness is tracked as the percentage of all submitted MSP general practitioner claims with ICD-9 code 487 (influenza). Data provided by Population Health Surveillance and Epidemiology, BC Ministry of Health Services

**Note:** MSP week beginning 1 August 2013 corresponds to sentinel ILI week 31; data current to 13 November 2013.

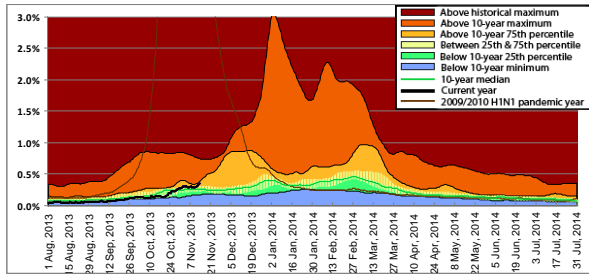
### Interior



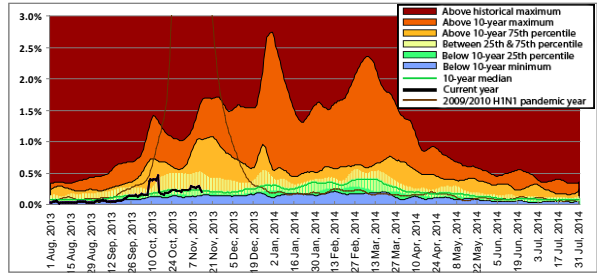
### Vancouver Island



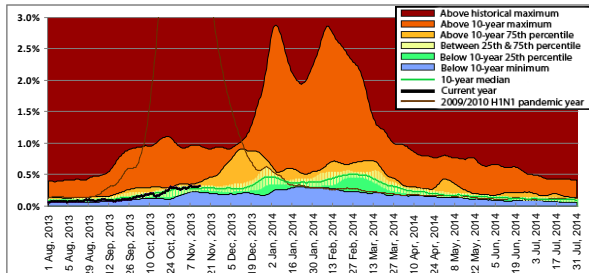
### Fraser



### Northern



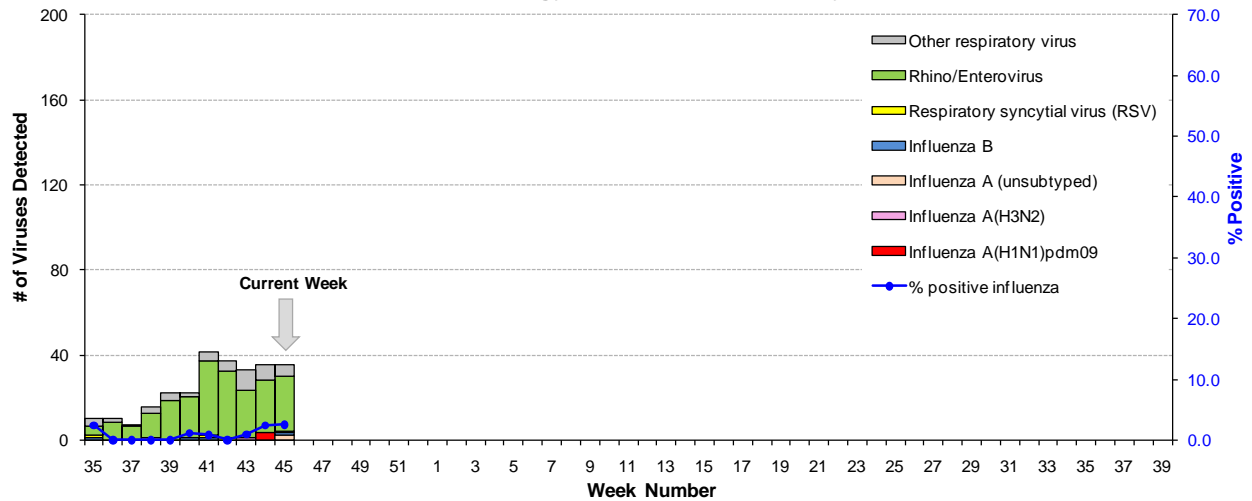
### Vancouver Coastal



### Laboratory Reports

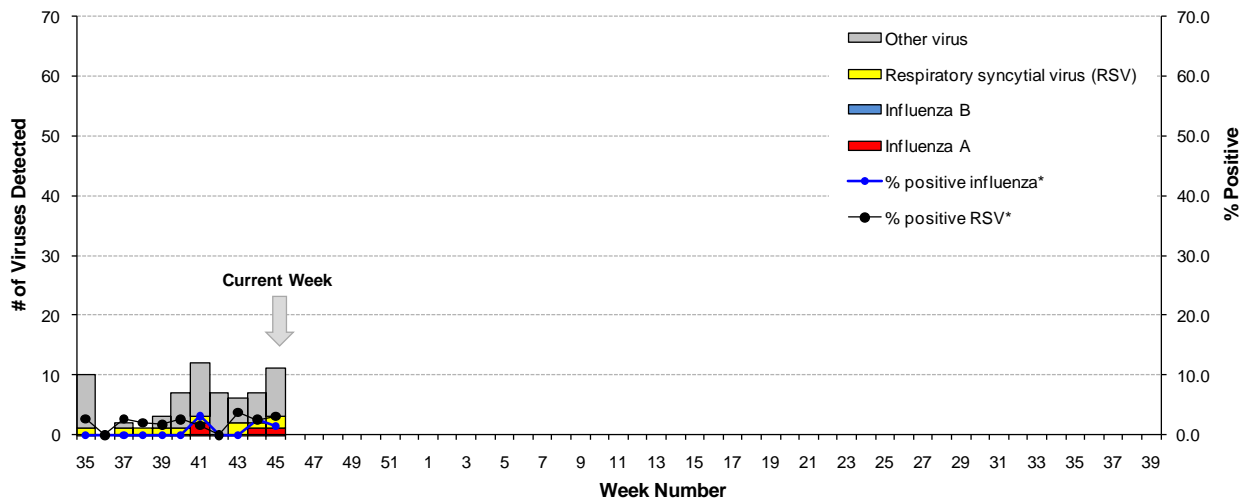
In weeks 44-45, 245 respiratory specimens were tested for influenza viruses by the BC Public Health Microbiology & Reference Laboratory, PHSA. Of these, 6 were positive for influenza, including 3 for influenza A(H1N1)pdm09 in week 44 (FHA: 1; VCHA: 2), 2 for influenza A (un-subtyped) (FHA:1; VCHA: 1) in week 45, and one for influenza B from VCHA in week 45. The influenza positivity rate increased from <1% in previous weeks to 2.4% in weeks 44-45. Rhino/enteroviruses continued to be the most commonly detected respiratory viruses; others were also sporadically detected.

**Influenza and other virus detections among respiratory specimens submitted to BC Public Health Microbiology & Reference Laboratory, PHSA, 2013-14**



In weeks 44-45, 105 respiratory specimens were tested at the BC Children's and Women's Health Centre Laboratory; 2 (1.9%) were positive for influenza A (un-subtyped). Parainfluenza virus was the most commonly detected respiratory virus; others were also sporadically detected.

**Influenza and other virus detections among respiratory specimens submitted to BC Children's and Women's Health Centre Laboratory, 2013-14**

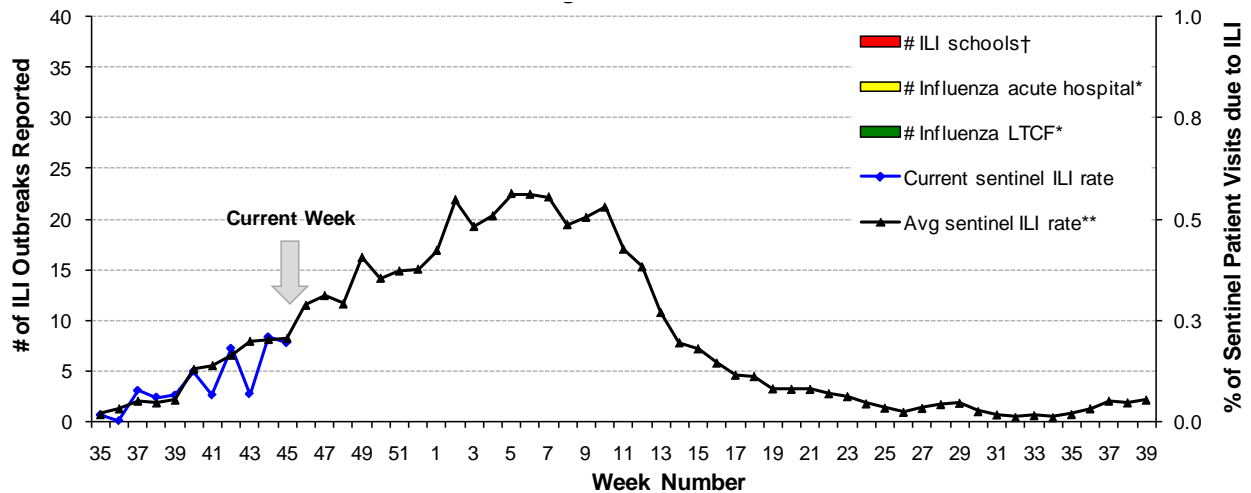


\* Positive rates were calculated using aggregate data. The denominators for each rate represent the total number of tests; multiple tests may be performed for a single specimen and/or patient.

## Influenza-like Illness (ILI) Outbreaks

No laboratory-confirmed influenza outbreaks were reported from long-term care facilities (LTCF) in weeks 44-45. Two ILI outbreaks due to laboratory-confirmed entero/rhinoviruses were reported in week 44, including one from IHA and one from VIHA.

Number of influenza-like illness (ILI) outbreaks reported, compared to current sentinel ILI rate and historical average sentinel ILI rate, British Columbia 2013-14



\* Facility-based influenza outbreaks defined as 2 or more ILI cases within 7-day period, with at least one laboratory-confirmed case of influenza.  
 † School-based ILI outbreak defined as >10% absenteeism on any day, most likely due to ILI.  
 \*\* Historical values exclude 2008-09 and 2009-10 seasons due to atypical seasonality.

## National

### FluWatch (week 44):

National influenza activity increased slightly in week 44. Sporadic activity was reported in 10 regions across BC, AB, SK, ON, and QC. The number of positive laboratory detections for influenza increased, bringing the percentage of positive influenza tests to 1.2%. Influenza A(H3N2), influenza A(H1N1)pdm09 and influenza B viruses co-circulated. One new paediatric hospitalization with influenza A(H1N1)pdm09 and one new adult hospitalization with influenza A (un-subtyped) were reported through sentinel hospital surveillance networks in week 44. The ILI consultation rate declined slightly but generally has been higher than historical norms so far this year. Details are available at: [www.phac-aspc.gc.ca/fluwatch/13-14/w44\\_13/index-eng.php](http://www.phac-aspc.gc.ca/fluwatch/13-14/w44_13/index-eng.php).

### National Microbiology Laboratory (NML): Strain Characterization

From September 1 to November 14, 2013, 11 isolates were collected from provincial and hospital labs and characterized at the NML as follows:

- 4 A/Victoria/361/2011-like (H3N2)<sup>¶</sup> from ON and AB;
- 2 A/California/07/09-like [A(H1N1)]<sup>\*</sup> from NB and ON;
- 4 B/Massachusetts/02/12-like<sup>†</sup> from ON and AB;
- 1 B/Brisbane/60/2008-like<sup>\*\*</sup> from ON;

<sup>¶</sup> Virus most closely related to the recommended H3N2 reference virus for the 2013-14 northern hemisphere influenza vaccine.

<sup>\*</sup> Virus most closely related to the recommended H1N1 reference virus for the 2013-14 northern hemisphere influenza vaccine.

<sup>†</sup> Virus most closely related to the recommended influenza B component for the 2013-14 northern hemisphere influenza vaccine; belongs to the B Yamagata lineage.

<sup>\*\*</sup> Virus most closely related to the recommended influenza B component for the 2011-2012 northern hemisphere influenza vaccine; belongs to the B Victoria/02/87 lineage.

### **NML: Antiviral Resistance**

From September 1, 2013 to November 14, 2013, six influenza A [4 A(H3N2) and 2 A(H1N1)pdm09] viruses were tested for resistance to amantadine at the National Microbiology Laboratory (NML); all tested viruses were found to be resistant. Eleven influenza viruses [4 A(H3N2), 2 A(H1N1)pdm09, and 5 B] were tested for resistance to oseltamivir and zanamivir; all tested viruses were sensitive to both antiviral drugs.

### **International**

**USA (week 44):** Influenza activity in the United States remained low in week 44. Of the 4,118 specimens tested, 201 (4.9%) were positive for influenza viruses, of which 83.1% were influenza A [25.7% A(H1N1)pdm09, 11.4% A(H3N2), 62.9% un-subtyped] and 16.9% were influenza B. Details are available at: [www.cdc.gov/flu/weekly/](http://www.cdc.gov/flu/weekly/).

**WHO (as of November 11, 2013):** Although influenza-like illness activity started to increase in many European countries, influenza detections in the northern hemisphere temperate zones remained low. Influenza transmission in most regions of Asia was low, with the exception of Cambodia and Lao People's Democratic Republic where an increase in activity was observed; co-circulation of influenza A(H1N1)pdm09, influenza A(H3N2) and influenza B virus was reported in these areas. In contrast, decreasing influenza activity was reported in other Asian regions, including Hong Kong, China, Thailand and Viet Nam. In the Caribbean region of Central America and tropical South American countries, reported cases of influenza A infection remained at low levels in most regions, with increased reports of influenza B in certain countries. Influenza activity peaked in the temperate countries of South America and in South Africa in late June. Temperate South American countries reported cases of A(H1N1)pdm09, A(H3N2) and influenza B, but acute respiratory activity remained low. In Australia and New Zealand, numbers of influenza viruses detected and rates of influenza-like illness decreased; co-circulation of influenza A(H1N1)pdm09, A(H3N2) and B viruses was reported in both countries. Details are available at: [www.who.int/influenza/surveillance\\_monitoring/updates/en/](http://www.who.int/influenza/surveillance_monitoring/updates/en/).

**Avian Influenza A(H7N9) Virus:** Since its emergence in February 2013, 140 laboratory-confirmed cases of human infection with avian influenza A(H7N9) have been reported, including four cases reported in China in October of this year. No cases have been reported so far in November. These most recent cases follow a period of inactivity in late August and September and raise concerns about a possible re-emergence of this virus in fall/winter months, reflecting the natural seasonality of influenza in temperate regions. While the overall risk assessment and recommendations remain unchanged at this time, clinicians should remain vigilant for patients presenting with severe acute respiratory illness (SARI) with recent travel or epidemiological links to affected areas. Details are available at: [www.who.int/influenza/human\\_animal\\_interface/influenza\\_h7n9](http://www.who.int/influenza/human_animal_interface/influenza_h7n9).

**Middle East Respiratory Syndrome Coronavirus (MERS-CoV):** As of November 11, 2013, the WHO had been informed of a total of 153 lab-confirmed cases of MERS-CoV and 64 deaths. Five countries in the Middle East have been affected, including the Kingdom of Saudi Arabia (which accounts for ~80% of case reports), the United Arab Emirates, Jordan, Qatar, and Oman. Unconfirmed reports of at least one MERS-CoV case in Kuwait have also been reported this week. On November 6, Spain announced the first probable MERS-CoV case to be reported in association with the Hajj pilgrimage. Once confirmed, Spain would become the fifth country in Europe to report an imported MERS-CoV case. No cases have been reported to date in the Americas. As Hajj-related travel may include extended stay and given an incubation period of 10 days or more, clinicians are reminded to stay alert for possible importations among patients presenting with severe acute respiratory illness (SARI) and links to the Middle East. Additional MERS-CoV details are available at: [www.who.int/csr/disease/coronavirus\\_infections/en/index.html](http://www.who.int/csr/disease/coronavirus_infections/en/index.html).

### **WHO Recommendations for 2013-14 Northern Hemisphere Influenza Vaccine**

On February 21, 2013, the WHO announced the recommended strain components for the 2013-14 northern hemisphere vaccine:

A/California/7/2009 (H1N1)pdm09 virus

A/Victoria/361/2011 (H3N2)-like virus\*

B/Massachusetts/2/2012-(Yamagata lineage)-like virus\*\*

\*For A/H3N2, it is recommended that A/Texas/50/2012 be used as the A(H3N2) vaccine component because of antigenic changes in earlier A/Victoria/361/2011-like vaccine viruses (such as IVR-165) resulting from adaptation to propagation in eggs.

\*\* This one of the three recommended components is different from the northern hemisphere seasonal TIV vaccines produced and administered in 2012-13 (although remaining of the same lineage).

For further details, see:

[www.who.int/influenza/vaccines/virus/recommendations/2013\\_14\\_north/en/index.html](http://www.who.int/influenza/vaccines/virus/recommendations/2013_14_north/en/index.html).



## **Additional Information**

### **List of Acronyms:**

**ACF:** Acute Care Facility  
**AI:** Avian influenza  
**FHA:** Fraser Health Authority  
**HBoV:** Human bocavirus  
**HMPV:** Human metapneumovirus  
**HSDA:** Health Service Delivery Area  
**IHA:** Interior Health Authority  
**ILI:** Influenza-Like Illness  
**LTCF:** Long-Term Care Facility

**MSP:** BC Medical Services Plan  
**NHA:** Northern Health Authority  
**NML:** National Microbiological Laboratory  
**A(H1N1)pdm09:** Pandemic H1N1 influenza  
**RSV:** Respiratory syncytial virus  
**VCHA:** Vancouver Coastal Health Authority  
**VIHA:** Vancouver Island Health Authority  
**WHO:** World Health Organization

### **Web Sites:**

BCCDC Emerging Respiratory Pathogen Updates: [www.bccdc.ca/dis-cond/DiseaseStatsReports/default.htm](http://www.bccdc.ca/dis-cond/DiseaseStatsReports/default.htm)

### **Influenza Web Sites**

Canada – Flu Watch: [www.phac-aspc.gc.ca/fluwatch/](http://www.phac-aspc.gc.ca/fluwatch/)

Washington State Flu Updates: [www.doh.wa.gov/Portals/1/Documents/5100/fluupdate.pdf](http://www.doh.wa.gov/Portals/1/Documents/5100/fluupdate.pdf)

USA Weekly Surveillance Reports: [www.cdc.gov/flu/weekly/](http://www.cdc.gov/flu/weekly/)

European Influenza Surveillance Scheme:

[ecdc.europa.eu/EN/HEALTHTOPICS/SEASONAL\\_INFLUENZA/EPIDEMIOLOGICAL\\_DATA/Pages/Weekly\\_Influenza\\_Surveillance\\_Overview.aspx](http://ecdc.europa.eu/EN/HEALTHTOPICS/SEASONAL_INFLUENZA/EPIDEMIOLOGICAL_DATA/Pages/Weekly_Influenza_Surveillance_Overview.aspx)

WHO – Weekly Epidemiological Record: [www.who.int/wer/en/](http://www.who.int/wer/en/)

WHO Collaborating Centre for Reference and Research on Influenza (Australia):  
[www.influenzacentre.org/](http://www.influenzacentre.org/)

Australian Influenza Report: [www.health.gov.au/internet/main/publishing.nsf/content/cda-surveil-ozflu-flucurr.htm](http://www.health.gov.au/internet/main/publishing.nsf/content/cda-surveil-ozflu-flucurr.htm)

New Zealand Influenza Surveillance Reports: [www.surv.esr.cri.nz/virology/influenza\\_weekly\\_update.php](http://www.surv.esr.cri.nz/virology/influenza_weekly_update.php)

### **Avian Influenza Web Sites**

WHO – Influenza at the Human-Animal Interface: [www.who.int/csr/disease/avian\\_influenza/en/](http://www.who.int/csr/disease/avian_influenza/en/)

World Organization for Animal Health: [www.oie.int/eng/en\\_index.htm](http://www.oie.int/eng/en_index.htm)

### **Contact Us:**

Tel: (604) 707-2510

Fax: (604) 707-2516

Email: [InfluenzaFieldEpi@bccdc.ca](mailto:InfluenzaFieldEpi@bccdc.ca)

Communicable Disease Prevention and Control Services (CDPACS)

BC Centre for Disease Control

655 West 12<sup>th</sup> Ave, Vancouver BC V5Z 4R4

Online: [www.bccdc.ca/dis-cond/DiseaseStatsReports/influSurveillanceReports.htm](http://www.bccdc.ca/dis-cond/DiseaseStatsReports/influSurveillanceReports.htm)

# Influenza-Like Illness (ILI) Outbreak Summary Report Form

Please complete and email to [ilioutbreak@bccdc.ca](mailto:ilioutbreak@bccdc.ca)

**Note: This form is for provincial surveillance purposes.**

**Please notify your local health unit per local guidelines/requirements.**

**ILI:** Acute onset of respiratory illness with fever and cough and with one or more of the following: sore throat, arthralgia, myalgia, or prostration which *could* be due to influenza virus. In children under 5, gastrointestinal symptoms may also be present. In patients under 5 or 65 and older, fever may not be prominent.

**Schools and work site outbreak:** greater than 10% absenteeism on any day, most likely due to ILI.

**Residential institutions (facilities) outbreak:** two or more cases of ILI within a seven-day period.

<b>A</b>	<b><u>Reporting Information</u></b>	Health unit/medical health officer notified? <input type="checkbox"/> Yes <input type="checkbox"/> No
	Person Reporting: _____	Title: _____
	Contact Phone: _____	Email: _____
	Health Authority: _____	HSDA: _____
	Full Facility Name: _____	
	Is this report:	<input type="checkbox"/> First Notification ( <i>complete section B below; Section D if available</i> ) <input type="checkbox"/> Update ( <i>complete section C below; Section D if available</i> ) <input type="checkbox"/> Outbreak Over ( <i>complete section C below; Section D if available</i> )

<b>B</b>	<b><u>First Notification</u></b>
	Type of facility: <input type="checkbox"/> LTCF <input type="checkbox"/> Acute Care Hospital <input type="checkbox"/> Senior's Residence (if ward or wing, please specify name/number: _____)
	<input type="checkbox"/> Workplace <input type="checkbox"/> School (grades: _____) <input type="checkbox"/> Other (_____)
	Date of onset of first case of ILI (dd/mm/yyyy): <u>DD</u> / <u>MMM</u> / <u>YYYY</u>

Numbers to date	Residents/Students	Staff
<b>Total</b>		
<b>With ILI</b>		
<b>Hospitalized</b>		
<b>Died</b>		

<b>C</b>	<b><u>Update AND Outbreak Declared Over</u></b>
	Date of onset for most recent case of ILI (dd/mm/yyyy): <u>DD</u> / <u>MMM</u> / <u>YYYY</u>
	If over, date outbreak declared over (dd/mm/yyyy): <u>DD</u> / <u>MMM</u> / <u>YYYY</u>

Numbers to date	Residents/Students	Staff
<b>Total</b>		
<b>With ILI</b>		
<b>Hospitalized</b>		
<b>Died</b>		

<b>D</b>	<b><u>Laboratory Information</u></b>
	Specimen(s) submitted? <input type="checkbox"/> Yes (location: _____) <input type="checkbox"/> No <input type="checkbox"/> Don't know If yes, organism identified? <input type="checkbox"/> Yes (specify: _____) <input type="checkbox"/> No <input type="checkbox"/> Don't know